

Title (en)  
DYE-SENSITISED SOLAR CELL ELEMENT

Title (de)  
FARBSTOFFSENSIBILISIERTES SOLARZELLENELEMENT

Title (fr)  
ÉLÉMENT À CELLULE SOLAIRE SENSIBILISÉE PAR COLORANT

Publication  
**EP 2980915 A4 20161123 (EN)**

Application  
**EP 13881218 A 20131218**

Priority  
• JP 2013075455 A 20130330  
• JP 2013083824 W 20131218

Abstract (en)  
[origin: EP2980915A1] A dye-sensitized solar cell element includes at least one dye-sensitized solar cell, and the dye-sensitized solar cell includes a first electrode, a second electrode which faces the first electrode, and an oxide semiconductor layer which is provided on the first electrode. The oxide semiconductor layer includes a light absorbing layer which is provided on the first electrode and a reflecting layer as a layer which is in contact with a portion of a first surface of a side opposite to the first electrode among surfaces of the light absorbing layer and which is arranged at a position farthest from the first electrode. The first surface of the light absorbing layer includes a second surface which is in contact with the reflecting layer, and a surface area S 1 of the first surface and a surface area S 2 of the second surface satisfy the following formula:  $0.7 \leq S 2 / S 1 < 1$ . The reflecting layer is arranged in an inner side of the first surface of the light absorbing layer.

IPC 8 full level  
**H01G 9/20** (2006.01)

CPC (source: EP US)  
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Citation (search report)  
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• [A] US 2012312370 A1 20121213 - DEMOPOULOS GEORGE P [CA], et al  
• [A] US 2010163102 A1 20100701 - HO WEN-HSIEN [TW], et al  
• [A] MEYSAM PAZOKI ET AL: "CVD-grown TiO2 particles as light scattering structures in dye-sensitized solar cells", RSC ADVANCES, vol. 2, no. 32, 1 January 2012 (2012-01-01), pages 12278 - 12285, XP055310634, DOI: 10.1039/c2ra21361c  
• [A] MIN-KYU SON ET AL: "Analysis on the Light-Scattering Effect in Dye-Sensitized Solar Cell according to the TiO 2 Structural Differences", INTERNATIONAL JOURNAL OF PHOTOENERGY, vol. 64, no. 1, 1 January 2012 (2012-01-01), US, pages 73 - 8, XP055310637, ISSN: 1110-662X, DOI: 10.1016/j.jphotochem.2006.04.030  
• See references of WO 2014162639A1

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